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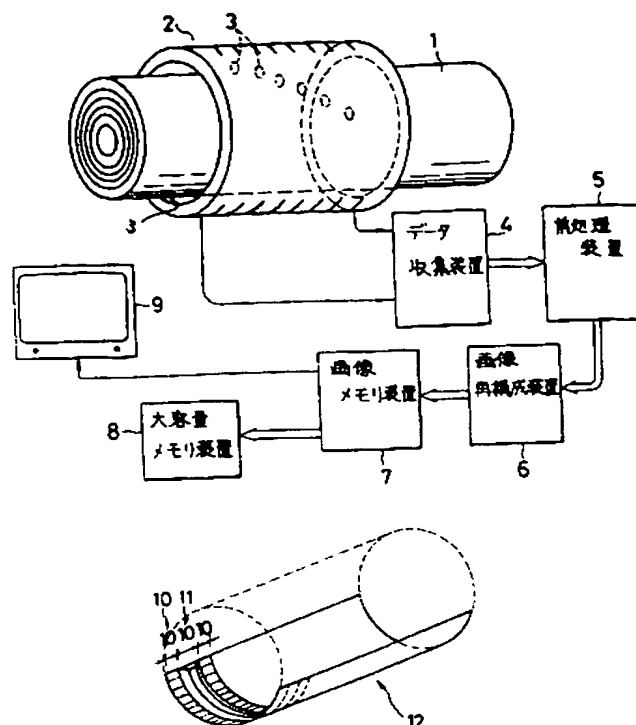
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TITLE : RADIATION TOMOGRAPHIC
MEASURING DEVICE



ABSTRACT : PURPOSE: To enable measurement of the condition of each sectional plane of a long-sized specimen and inspection of an internal defect, structure, compsn. or the like over the entire part by feeding the specimen into a radiation detector and passing the specimen therethrough so that the tomographic image in each sectional plane position of the specimen is obt'd. at one time.

CONSTITUTION: Radioactive isotope elements 3 are provided, for example, by 300 pieces at prescribed intervals in the axial direction of a radiation detector 2. The RI sources 3 are attached in the positions different from each other by 1, 2° each and the adjacent RI sources 3 are positioned respectively differently by 180°. The RI sources 3 are so arranged as to radiate radiations of fan beams along the slice plane of a casing 2 at 30° fan angle. Plural projections to be functioned as collimators are formed at equal intervals on the inside surface side of the detector 2 in parallel with the plane intersecting orthogonally with the central axial line of the cylinder and many radiation detecting elements consisting of, for example, semiconductors are arranged in the groove parts thereof. A specimen 1 is fed successively into the cylindrical detector 2 from one port toward the other port.

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